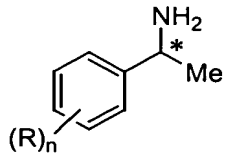
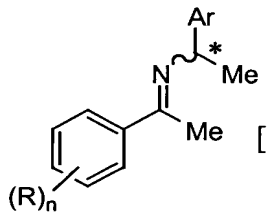
In The Claims

Claim 1 (previously amended): A process for producing an optically active 1-(fluoro- or trifluoromethyl-substituted phenyl)ethylamine represented by the general formula 5:



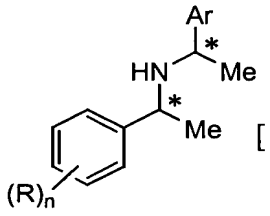
[5]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5, and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, and the asterisk represents a chiral carbon, by asymmetrically reducing an optically active imine represented by the general formula 3:



[3]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5 and it takes an arbitary substitution position, except for the ortho position when R is a fluorine atom and n is 1, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon, using a hydride reducing agent, converting to an optically active secondary amine represented by the general formula 4:



[4]

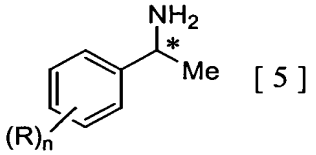
wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5 and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisks represent chiral carbons, and subjecting the secondary amine, its salt of an inorganic acid or its salt of an organic acid to hydrogenolysis.

Claim 2 (original): The production process according to claim 1, wherein the hydride reducing agent is sodium borohydride.

Claim 3 (original): The production process according to claim 1, wherein the inorganic acid or organic acid comprises hydrochloric acid, hydrobromic acid, phthalic acid, benzenesulfonic acid, p-toluenesulfonic acid or optically active mandelic acid.

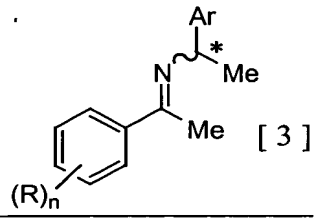
D1 cont'd

Claim 4 (currently amended): ~~The production process according to claim 1,~~ A process for producing an optically active 1-(fluoro- or trifluoromethyl-substituted phenyl)ethylamine represented by the general formula 5:



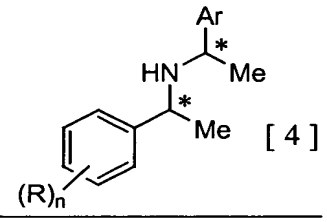
[5]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5, and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, and the asterisk represents a chiral carbon, by asymmetrically reducing an optically active imine represented by the general formula 3:



[3]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5 and it takes an arbitary substitution position, except for the ortho position when R is a fluorine atom and n is 1, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon, using a hydride reducing agent, converting to an optically active secondary amine represented by the general formula 4:



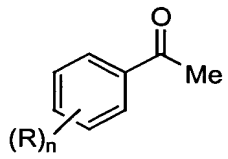
[4]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5 and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisks represent chiral carbons, and subjecting the secondary amine, its salt of an inorganic acid or its salt of an organic acid to hydrogenolysis,

wherein hydrogenolysis is carried out while heating at 40°C or higher using a group VIII metal catalyst at 0.5 wt% or less when converted as metal in a hydrogen atmosphere of 2 MPa or lower.

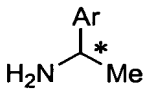
Claim 5 (previously amended): The production process according to claim 1, wherein the optically active imine represented by the general formula 3 is an

optically active imine obtained by dehydration and condensation under acidic conditions of a fluoro- or trifluoromethyl-substituted phenylmethyl ketone represented by the general formula 1:



[1]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5, and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, and an optically active primary amine represented by the general formula 2:



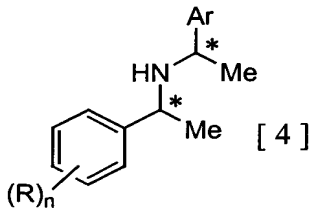
[2]

wherein, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon.

Claim 6 (previously amended): The production process according to claim 1, wherein stereochemistry of the compound represented by the general formula 3, 4 or 5 is R form or S form.

Claim 7 (previously amended): The production process according to claim 5, wherein stereochemistry of the compound represented by the general formula 2 is R form or S form.

Claim 8 (previously amended): A purification process, characterized in that an optically active secondary amine represented by the general formula 4:

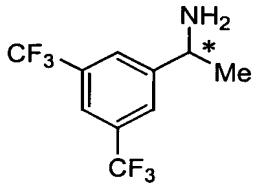


[4]

wherein, R represents a fluorine atom or trifluoromethyl group, n represents 1 to 5 and it takes an arbitrary substitution position, except for the ortho position when R is a fluorine atom and n is 1, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisks represent chiral carbons is converted to a salt of an inorganic acid or organic acid, followed by purification by recrystallization.

Claim 9 (original): The purification process according to claim 8, wherein the inorganic acid or organic acid comprises hydrochloric acid, hydrobromic acid, phthalic acid, benzenesulfonic acid, p-toluenesulfonic acid or optically active mandelic acid.

Claim 10 (previously amended): A purification process, characterized in that an optically active 1-(3,5-bis-trifluoromethylphenyl)ethylamine represented by the formula 6:



[6]

wherein, the asterisk represents a chiral carbon, is converted to a salt of an inorganic acid or organic acid, followed by purification by recrystallization.

Claim 11 (original): The purification process according to claim 10, wherein the organic acid comprises p-toluenesulfonic acid, optically active mandelic acid or optically active tartaric acid.

Claim 12 (previously amended): The purification process according to claim 8, wherein stereochemistry of the compound represented by the general formula 4 is R form or S form.

Claim 13 (previously amended): The purification process according to claim 10, wherein stereochemistry of the compound represented by the formula 6 is R form or S form.

Claims 14-24 (cancelled)

D1 cont'd

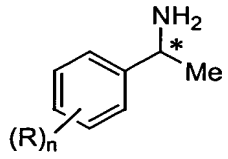
Claim 25 (previously added): The production process according to claim 4, wherein hydrogenolysis is carried out while heating at 55°C or higher.

Claim 26 (previously added): The production process according to claim 1, wherein Ar of the general formulas 3 and 4 represents a phenyl group or 2-naphthyl group.

Claim 27 (cancelled)

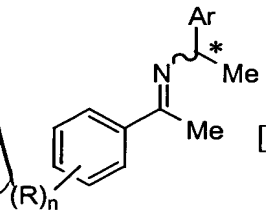
Claim 28 (previously added): The production process according to claim 1, wherein R of the general formulas 3, 4 and 5 represents a fluorine atom.

Claim 29 (New): A process for producing an optically active 1-(trifluoromethyl-substituted phenyl)ethylamine represented by formula 5:



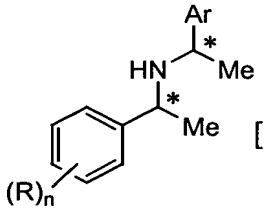
[5]

wherein, R represents a trifluoromethyl group and takes an arbitrary substitution position, n represents 1 to 5, and the asterisk represents a chiral carbon, by asymmetrically reducing an optically active imine represented by formula 3:



[3]

wherein, R represents a trifluoromethyl group and takes an arbitrary substitution position, n represents 1 to 5, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon, using a hydride reducing agent, converting to an optically active secondary amine represented by formula 4:



[4]

wherein, R represents a trifluoromethyl group and takes an arbitrary substitution position, n represents 1 to 5, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisks represent chiral carbons, and subjecting the secondary amine, its salt of an inorganic acid or its salt of an organic acid to hydrogenolysis.

Claim 30 (new): The production process according to claim 4, wherein R in formulas 3, 4 and 5 represents a trifluoromethyl group.

Claim 31 (new): The production process according to claim 4, wherein R in formulas 3, 4 and 5 represents a fluorine atom.

D1 cont'd

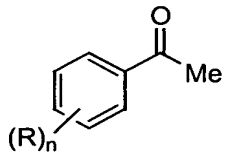
Claim 32 (new): The production process according to claim 4, wherein the hydride reducing agent is sodium borohydride.

Claim 33 (new): The production process according to claim 29, wherein the hydride reducing agent is sodium borohydride.

Claim 34 (new): The production process according to claim 4, wherein the inorganic acid or organic acid comprises hydrochloric acid, hydrobromic acid, phthalic acid, benzenesulfonic acid, p-toluenesulfonic acid or optically active mandelic acid.

Claim 35 (new): The production process according to claim 29, wherein the inorganic acid or organic acid comprises hydrochloric acid, hydrobromic acid, phthalic acid, benzenesulfonic acid, p-toluenesulfonic acid or optically active mandelic acid.

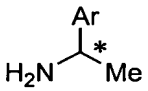
Claim 36 (new): The production process according to claim 4, wherein the optically active imine represented by formula 3 is obtained by dehydration and condensation under acidic conditions of a fluoro- or trifluoromethyl-substituted phenylmethyl ketone represented by formula 1:



[1]

wherein, R represents a fluorine atom or trifluoromethyl group and takes an arbitrary substitution position, except R is not in the ortho position when R is a fluorine atom and n is 1, n represents 1 to 5, and

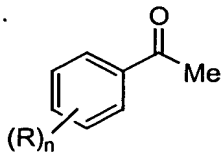
an optically active primary amine represented by formula 2:



[2]

wherein, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon.

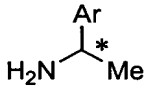
Claim 37 (new): The production process according to claim 29, wherein the optically active imine represented by formula 3 is obtained by dehydration and condensation under acidic conditions of a trifluoromethyl-substituted phenylmethyl ketone represented by formula 1:



[1]

wherein, R represents a trifluoromethyl group and takes an arbitrary substitution position, n represents 1 to 5, and

an optically active primary amine represented by formula 2:



[2]

wherein, Ar represents a phenyl group or 1- or 2-naphthyl group, and the asterisk represents a chiral carbon.

Claim 38 (new): The production process according to claim 4, wherein the stereochemistry of the compound represented by formula 3, 4 or 5 is R form or S form.

Claim 39 (new): The production process according to claim 29, wherein the stereochemistry of the compound represented by formula 3, 4 or 5 is R form or S form.

Claim 40 (new): The production process according to claim 4, wherein Ar in formulas 3 and 4 represents a phenyl group or a 2-naphthyl group.

Claim 41 (new): The production process according to claim 29, wherein Ar in formulas 3 and 4 represents a phenyl group or 2-naphthyl group.

Claim 42 (new): The production process according to claim 1, wherein the hydrogenolysis is carried out at a temperature of at least 40°C.

Claim 43 (new): The production process according to claim 1, wherein the hydrogenolysis is carried out at a temperature of at least 40°C in a hydrogen atmosphere of 2 MPa or lower.